FOG INDEX Northern Edge 2006 is the first time the Air Force trains in a virtual environment with numerous commands around the nation. **JARGON WATCH AWACS**: Airborne warning and control system **DMOC**: Distributed **Mission Operations Center DMO**: Distributed Mission Operations AIR FORGE SAVES MONEY, ABBOMPLISHES

Simulators networked for Alaska's Northern Edge 2006

By Capt. Nathan D. Broshear 505th Command and Control Wing Public Affairs

ELMENDORF AIR FORCE BASE, Alaska — The days of deploying an E-3 Sentry and other command and control aircraft to military exercises may soon be a rarity. With a large crew and an aging airframe, airborne warning and control systems, or AWACS, are expensive to deploy for a two-week training opportunity.

But thanks to powerful computer models and
the ability to network
simulators around the nation, Air Force and joint
warfighters at Exercise
Northern Edge 2006 are
able to train with E-3
AWACS, E-8 Joint Surveillance Target Attack
Radar System and EP-3
Aries aircraft without
them actually going airborne.

Airmen of the 962nd Airborne Air Control Squadron here are flying virtual missions over Alaska. Meanwhile, Airmen from the 970th AACS at Tinker AFB, Okla., work as the exercise control at the Distributed Mission Operations Center, or DMOC, part of the 505th Distributed Warfare Group at Kirtland AFB, N.M.

Master Sgt. John White, an evaluator weapons director and reservist with the 970th AACS — the Air Force's only Reserve AWACS squadron — simulated bombers, fighters and helicopters flying over the Gulf of Alaska. His fleet of aircraft appears on screens around the Pacific region inside Air Force jets,

Navy ships and at the air operations center at Hickam AFB, Hawaii.

"Live aircraft also are combined with a number of virtual entities to give an AWACS crew located in simulators at the 962nd AACS a realistic air picture," Sergeant White said. "Instead of controlling a few dozen live training missions, they'll be operating in an environment that appears to be a massive air campaign."

The exercise, which took place in June, is the first time a tactical-level DMO event was conducted with the

Pacific Air Operations Center at Hickam AFB and the first time that Pacific Command has integrated DMO into joint training.

Capt. Kim Thompson, an air battle manager with the 970th AACS has been helping train Airmen from around the Air Force.

"Northern Edge '06 is the first time that we've trained in a virtual environment with a number of different commands and warfighting headquarters. Pacific Command, Alaska Command, Air Combat Command and Pacific Air Forces are all participating in this event," she said.

The line between real and simulated missions is being blurred, Captain Thompson said. The three virtual players are AWACS crews at Elmendorf AFB, JSTARS crews at Robins AFB, Ga., and Navy EP-3 crews working from Whidbey Island Naval Air Station in Washington. Data from these platforms and the DMOC is then fed into the air

operations center at Hickam AFB.

"In a typical scenario, a Navy EP-3 crew in a simulator detected a DMOC computer-generated surface to air missile. Then an E-3 crew in a simulator at Elmendorf AFB used the unique AWACS communications links to task a real F-16 flying over the Alaskan ranges to destroy the threat," the captain said.

While training inside actual command and control aircraft won't disappear, Sergeant White believes exercises like Northern Edge '06 will serve to prove the value of combining live, virtual and constructive elements to give crews a wide range of training opportunities.

"When a crew is flying a real mission they have to contend with atmospherics, maintenance issues, long en route times to the training area, or simply the stress of deconflicting live aircraft," Sergeant White said. "But DMO still allows us to get very high fidelity training without sending a lot of people (on temporary duty) or spending a lot of money burning jet fuel."

The cost savings is substantial. "For a typical exercise deployment we may have to deploy 40 people," Sergeant White said. "But by using distributed mission operations, our team can train our entire 14-person mission crew with a much smaller footprint."

"Northern Edge '06 is the best of both worlds — live training enhanced with virtual aircraft to prepare the warfighter," he said.